



IFW AF/3714

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Knust *et al.*  
Serial No.: 09/483,854  
Filed: January 17, 2000  
For: Automated Wagering Recognition  
System

§ Examiner: Ashburn, S.  
§  
§ Group Art Unit: 3714  
§  
§ Atty Dkt No.: GENE.3

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Sir:

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I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner of Patents and Trademarks, Washington, D.C. 20231. Tim Cook	
21 July 04	Tim Cook
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AMENDED APPEAL BRIEF

(1) *Real party in interest.*

Genesis Gaming Solutions, Inc.

(2) *Related appeals and interferences.*

None.

(3) *Status of claims.*

Claims 1, 4-9, and 17-20 are pending, claims 2, 3, and 10-16 have been cancelled, and all pending claims are appealed.

*(4) Status of amendments.*

All amendments have been entered.

*(5) Summary of invention.*

The present invention comprises a computer implemented gambling tracking system **10**, used primarily to keep track of gambling by valued customers for special rewards (page 2 of the application as filed). The system includes a central computer **12** and a video multiplexer **18** coupled to the central computer. A gaming table **16** is associated with the video multiplexer and the gaming table includes a plurality of video imagers **44** which are coupled to the video multiplexer. Each of the plurality of video imagers is directed to a predetermined wagering location **46** on the table. The system further includes a chip recognition system (page 9, line 25 to page 13, line 6) in the central computer to determine the value of the wagers in each of the wagering locations. The recognition system includes an algorithm which takes into account multiple image component planes selected from the group consisting of hue, saturation, and lightness (HSL); particle analysis correlation; and a combination of them. The system also includes a platform **40** on the table above and adjacent to the predetermined wagering locations wherein each of the plurality of video imagers is located below the platform. The system also includes an arcuate wall **52** extending between the platform and the table with apertures through the wall and the video imagers positioned behind the wall and directed through the apertures. Finally, the system includes a light **50** below the platform and directed to each of the wagering locations, the light providing illumination projecting from the arcuate wall from below the platform laterally toward a predetermined gaming location.

(6) *Issue.*

- (a) Would claims 1, 4, 5, 8, 9, and 17-20 have been obvious to one skilled in the art at the time the present invention was made under 35 U.S.C. § 103(a) over Schubert (U.S. Patent 6,313,871) in view of Walsh (U.S. Patent 5,726,706); Helms *et al.* (U.S. Patent 6,344,874); and Fishbine *et al.* (U.S. Patent 5,781,647).

(7) *Grouping of claims.*

All claims stand or fall together.

(8) *Argument.*

*Claim 1*

Taking the Examiner's position regarding independent claim 1 in the Office Action of December 17, 2003, the claimed invention is a gambling tracking system comprising three systems usable together in combination: (i) a system directed to multiplexing cameras for monitoring gaming tables; (ii) a structure directed to a gaming table containing cameras; and (iii) a system directed to gaming chip recognition.

For purposes of this appeal, the Applicants conceded that Schubert, the primary reference cited by the Examiner, teaches a system for multiplexing cameras for monitoring a gaming table, as claimed in the present application. The Applicants reserve the right to later claim a system for multiplexing a plurality of images from multiple gaming tables, with multiplexers coupled together in series, as shown and described in the present application. However, the Applicants traverse the position of the Examiner in respect of features (ii) and (iii), those of the structure of the gaming table and the chip recognition system of this invention.

### *Structure of the Gaming Table*

On page 3 of the Office Action of December 17, 2003, the Examiner took the position that

“Schubert discloses the following features: a. A platform on the table above the predetermined wagering locations where each of the video imagers is located below the platform. *See fig. 1; col. 4:15-47*. More specifically, Schubert describes mounting the video imagers within a raised rail or ridge on the perimeter of the table. *See id.* Implicitly, this raised rail includes an upper surface constituting a platform wherein the internal imagers are below the platform and above the wagering locations.”

This position of the Examiner reads teachings into the Schubert reference which are simply not there. On the one hand, the Examiner takes the position that the “platform” of Schubert is the structure above the video imagers of Schubert, *i.e.* the chip tray 20. If this is so, then there is no way to stretch the teachings of Schubert to include a platform above the video imagers of the present invention, except to call it “implicit”. The Applicants candidly admit that in Column 4, starting at line 25, Schubert suggests “Additionally, video cameras can be installed within a raised rail or ridge that may be disposed around the perimeter.” However, there is no structure shown or suggested in Schubert just how this is to be done.

Further, the Examiner took the position that Schubert teaches:

“An arcuate wall extending between the platform and the table wherein the video imagers are positioned behind the arcuate wall. More specifically, *Schubert* describes a gaming table having a typical “arcuate” shape wherein video cameras are installed within a raised rail or ridge that may be disposed around the perimeter of the table. *See fig. 1; col. 4:25-27*. Notably, *Schubert* also describes placing imagers behind a curved, transparent wall. *See col. 4:56-5:8*.”

Once again, the Examiner is reading more into the reference than is really there. The curved, transparent wall suggested by Schubert is beneath the chip tray, adjacent the dealer, and not around the periphery of the gaming table, as stated by the Examiner. This

is the only reasonable interpretation of Schubert, which does not show any drawing figures to assist in parsing the meaning of this language, because Schubert goes on to state (in language conveniently omitted by the Examiner) “Such modified transparent walls 35 can be normal to the surface of the gaming table 10, for example, or disposed at other orientations to maximize the optics of one or more of the video cameras 27, but curved *to eliminate the possibility of other players seeing reflections in the transparent wall 35*. If Schubert were referring to the curved (arcuate) wall of the present invention, then there is simply no way for a player to see a reflection of any other player’s card because the wall of the present invention faces away from the players and toward the dealer (See Figures 2 and 3).

Next, the Examiner candidly admits that “Schubert does not describe the following features:

- a. Wall defining apertures therethrough wherein the video imagers are directed through the apertures.
- b. Light below the platform and directed to each of the watering locations, wherein the light provides illumination projects from the arcuate wall from below the platform laterally toward the gaming location.”

For these features, the Examiner cites Walsh. Per the Examiner, Walsh discloses a lighting security system in which lights and cameras are recessed within a curved fixture for illuminating and observing activity on a gaming table. The fixture is adaptable to the shape of a gaming table to provide a function and decorative lighting assembly allowing unobtrusive observation of gaming patrons and thereby promote a more congenial, but secure gaming environment.

However, in order to render the present invention obvious, one cannot simply take the language of Walsh in a vacuum; it must be combined with the structure of Schubert, which the Examiner has failed to do. In fact, Walsh teaches a structure suspended above a gaming table, with lights and camera directed down onto the gaming table from above. This structure cannot perform the function for which the present invention was made, and that is to track gambling on a gaming table. With light and camera above the table and

directed down, the system cannot determine the chip stack or the amount wagered at the gaming position, and the system fails. Further, the Examiner has not even referred to the language of claim 1 regarding this feature, and that is “a light *below the platform* and directed to each of the wagering locations, the light providing illumination *projecting from the arcuate wall* from below the platform *laterally* toward a predetermined gaming location. As before, if one accepts the Examiner’s position as to what in Schubert teaches the “arcuate wall”, this same structure must be considered in determining the combination with Walsh. And this the Examiner has not even made and attempt to do.

The Examiner takes the position that “*Helms* discloses that a known difficulty of using video cameras in locations with overhead lighting is the light create undesirable shadows that result in unsatisfactory image pickup. . . . A common solution to this problem is to provide an additional light source near the camera to illuminate the subject. The Applicants candidly admit that they are not the first to recognize the need to cast light on the subject in front of a camera. That’s not the issue. The issue is the Examiner has taken three references, Schubert, Walsh, and Helms, to try to show what the inventors have done and that is to illuminate the gaming position with laterally directed light in order to facilitate tracking the gaming on the table. As before, the Examiner has not explained just how the structures of these three references can be combined, or how such a combination results in the claimed structure.

At the risk of being far too repetitive, the table structure of the present invention includes an arcuate wall extending between the platform and the table, the arcuate wall defining apertures therethrough, the video imagers positioned behind the arcuate wall and directed through the apertures and a light below the platform and directed to each of the wagering locations, the light providing illumination projecting from the arcuate wall from below the platform laterally toward a predetermined gaming location. Even giving the broadest possible interpretation of the cited references, there is no suggestion in the references to make the combination made by the Examiner. Even if one could make such a combination, it would not result in the claimed structure of the gaming table.

### *Chip Recognition System*

In the Office Action of December 17, 2003, on page 5, the Examiner stated

“regarding the features directed to chip recognition, *Schubert* discloses all the features of the claim determining the value of wagers in each of the wagering locations using a recognition system including an algorithm which takes into account the multiple image component planes selected from the group consisting of (i) red, green, and blue (RGB), (ii) hue, saturation and lightness (i.e. HSL), (iii) particle analysis correlation; or (iv) a combination of (i), (ii) or (iii). Regardless, this feature would have been obvious to an artisan in view of the prior art discussed below. The examiner notes that the claim language only requires one method of image recognition listed in the group.”

Here, the Examiner has made a minor error with major consequences, and that is the language of the claim actually recites:

e. a chip recognition system in the central computer to determine the value of the wagers in each of the wagering locations, the recognition system including an algorithm which takes into account multiple image component planes selected from the group consisting of:

- i hue, saturation, and lightness,
- ii particle analysis correlation; and
- iii a combination i and/or ii;

Thus, nothing in any of the references, particularly *Fishbine*, shows or suggests this feature. *Fishbine* teaches

“Camera 16 continuously images a stack of gambling chips through its objective lens and generates frames of video signals representative thereof. The digitizer 18 produces two dimensional arrays of digital pixel values representative of the intensity of the pixel values of the video images captured by camera 16 at corresponding discrete pixel locations.

Fishbine goes on at Column 4 to discuss capturing an RGB image, but the red and green and blue *values* are not used in the chip recognition system of Fishbine; only the two dimensional position of these values on a grid is used. This is shown in Figure 2 of Fishbine, and discussed at length from Column 3 to Column 5 of Fishbine. Thus, this reference cannot render the chip recognition feature of the present invention obvious, with or without the additional structural features of the claims.

For all of these reasons, claim 1, and all the claims that depend therefrom, should be in condition for allowance and the Applicants respectfully request that the final rejection of the Examiner be reversed.

#### *Claim 4*

Claim 4 recites that the light is positioned within a recess beneath the platform. The Examiner has made no attempt to find this feature. He simply states that “*Walsh* additionally teaches mounting light within recesses of a mounting structure.” The Examiner has totally ignored material features of the claim, that of “a recess beneath the platform”, and thus the claim should be allowable.

#### *Claim 5*

The Applicants admit that Schubert teaches a trigger of sorts to initiate operation.

#### *Claim 8*

Claim 8, a data recites an input means for inputting alpha-numeric data manually into the central computer. The Examiner has made no attempt to find an alphanumeric input device for *any* computer implemented gambling tracking system. The Applicants candidly admit that they did not invent data input pads. But, no such data entry means are shown in the art for systems such as the present invention. Thus, claim 8 should be allowable.



*Claim 9*

Claim 9 recites means for determining which of the wagering locations is active. In response, the Examiner has recited a “change of state signal” from Schubert. Nothing in this reference shows or suggests this feature of the invention, and thus claim 9 should be allowable.

*Claim 17*

Claim 17 recites the light is underneath the platform. The Examiner did not address this claim, but previously cited Helms for features regarding the light. As previously discussed, Helms teaches hanging a light fixture above the table, and thus cannot show or suggest this feature. Thus, claim 17 should be allowable.

*Claims 18 and 19*

Claims 18 and 19 should be considered together, because claim 18 is provided for the sole purpose of providing proper antecedent basis for the features recited in claim 19. Read together, these claims add the feature of the table defining a substantially flat side and an arcuate side, and wherein the table further defines a dealer location along the substantially flat side and a plurality of gamer locations along the arcuate side (this much is conventional structure of a gaming table); wherein each of the plurality of video imagers is directed from a point adjacent one of the plurality of gamer locations generally in the direction of the dealer location.

The Examiner stated that “*Schubert* additionally teaches having each of the video imagers directed from a point adjacent to the gamer locations generally in the direction of the dealer location.” This issue has been somewhat addressed before, wherein Schubert provides an alternative embodiment of putting cameras within a raised rail or ridge that may be disposed around the perimeter. However, this does not suggest the feature recited in claims 18 and 19, and thus these claims should be allowable.

*Claim 20*

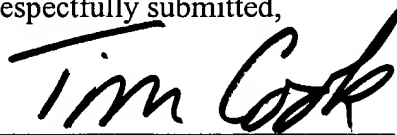
Claim 20 adds the feature wherein the predetermined wagering location is adapted to support a stack of wagering chips, including a bottom chip, and wherein the light illuminates the stack of wagering chips, including the bottom chip. Nothing in any reference recited by the Examiner even mentions the problem, much less suggesting a solution, to illuminating the bottom chip of a stack. Further, the problem is exacerbated by Helms, which illuminates the table from above. Thus, this claim should be allowable.

*Claims 6 and 7*

The Applicants candidly admit that they are not the first to invent a system for tracking the gambling of customers of a casino. Thus, Claim 6 and 7 should be allowable for the same reasons discussed above.

The Applicants assert that all claims are in condition for allowance and request that the rejection of the Examiner be reversed.

Respectfully submitted,

A handwritten signature in black ink that reads "Tim Cook". The signature is written in a cursive, slightly slanted style. The first name "Tim" is written above the last name "Cook", which is larger and more prominent.

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## CLAIMS ON APPEAL

1           1.       (Amended five times)       A computer implemented gambling tracking system  
2       comprising:

- 3           a.       a central computer;
- 4           b.       a video multiplexer coupled to the central computer;
- 5           c.       a gaming table associated with the video multiplexer;
- 6           d.       a plurality of video imagers on the gaming table, the video imagers  
7               coupled to the video multiplexer, and each of the plurality of video  
8               imagers directed to a predetermined wagering location on the table;
- 9           e.       a chip recognition system in the central computer to determine the value of  
10               the wagers in each of the wagering locations, the recognition system  
11               including an algorithm which takes into account multiple image  
12               component planes selected from the group consisting of:
  - 13               i       hue, saturation, and lightness,
  - 14               ii       particle analysis correlation; and
  - 15               iii       a combination i and/or ii;
- 16           f.       a platform on the table above and adjacent to the predetermined wagering  
17               locations wherein each of the plurality of video imagers is located below  
18               the platform;
- 19           g.       an arcuate wall extending between the platform and the table, the arcuate  
20               wall defining apertures therethrough, the video imagers positioned behind  
21               the arcuate wall and directed through the apertures; and

22                   h.       a light below the platform and directed to each of the wagering locations,  
23                   the light providing illumination projecting from the arcuate wall from  
24                   below the platform laterally toward a predetermined gaming location.

2-3.   (Canceled)

4.       (Amended)   The tracking system of claim 1, wherein the light is positioned  
within a recess beneath the platform.

5.       (Original)    The tracking system of claim 1, further comprising a trigger  
coupled to the multiplexer to initiate operation of the system.

6.       (Original)    The tracking system of claim 1, further comprising a data input  
means to uniquely identify a gambler to the tracking system.

7.       (Original)    The tracking system of claim 6, wherein the data input means  
comprises a magnetic card stripe reader.

8.       (Original)    The tracking system of claim 1, further comprising data input  
means for inputting alpha-numeric data manually into the central computer.

9. (Original) The tracking system of claim 1, further comprising means for determining which of the wagering locations is active.

10-16. (Canceled)

17. (Added by Amendment) The system of claim 1, wherein the light is underneath the platform.

1 18. (Added by Amendment) The system of claim 1, wherein the table defines a  
2 substantially flat side and an arcuate side, and wherein the table further defines a dealer  
3 location along the substantially flat side and a plurality of gamer locations along the  
4 arcuate side.

1 19. (Added by Amendment) The system of claim 18, wherein each of the  
2 plurality of video imagers is directed from a point adjacent one of the plurality of gamer  
3 locations generally in the direction of the dealer location.

1 20. (Added by Amendment) The system of claim 1, wherein the predetermined  
2 wagering location is adapted to support a stack of wagering chips, including a bottom  
3 chip, and wherein the light illuminates the stack of wagering chips, including the bottom  
4 chip.